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Editorial: Research on mastitis in sheep

George C. Fthenakis

Veterinary Faculty, University of Thessaly, 43100 Karditsa, Greece

Editorial

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Author for correspondence:
George C. Fthenakis, Email: gcf@vet.uth.gr

The adverse financial effects of mastitis in sheep have been documented repeatedly. More recently, the disease was also identified to be of significant welfare concern (European Food Safety Authority, 2014): clinical mastitis causes anxiety, severe pain, restlessness and changes in feeding patterns, whilst, in subclinical mastitis, behavioural patterns of sheep change. In recent years research output in ovine mastitis has increased sharply, leading us (my colleagues Natalia Vasileiou, Dimitris Chatzopoulos and Vasia Mavrogianni and myself) to undertake a review of the relevant literature. By using the search terms '*mastitis* AND *sheep*' in the Web of Science, 180 records were identified during the years up to 2000, 359 records from 2001 to 2010 and 458 records from 2011 to June 2019. Research output in ovine mastitis has also increased proportionately to all '*mastitis*' output: 3.6, 7.4 and 6.7% of all records, respectively in each of the above periods.

The primary aetiological agents of mastitis in sheep are staphylococci. In cases of clinical mastitis, staphylococci (mainly *Staphylococcus aureus*) account for up to 70% of cases in dairy flocks and up to 40% of cases in meat production flocks. Further, coagulase-negative staphylococcal species are the primary aetiological agents of subclinical mastitis, being responsible for over 65% of cases of the infection (Vasileiou *et al.*, 2019). Various research challenges are associated with staphylococcal mastitis in sheep. These include the potential significance of microbiota within the mammary gland, the protective role of anti-staphylococcal antibodies as part of the defence response, the clinical significance of staphylococcal classification based on the presence of virulence factors in the isolates and the possible transfer of cell-free genetic material of staphylococcal isolates resistant to antimicrobial agents through milk in diary production systems (Vasileiou *et al.*, 2019). Hence, one will expect further publications in this little-studied, but important, topic. The *Journal of Dairy Research* will continue to provide a publication means for high-quality research output in this area. The Journal will welcome contributions which lead to dissemination of innovative results of significance for the improvement of sheep welfare and productivity.

References

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